

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2003/002169

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G11B 7/13

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 G02B 7/04 G11B 7/00 G11B 7/095

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ, "DVD, CD, photo, detector, tracking, focusing, differential, phase"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,493,296 B1(Sony Corp.) 10 Dec. 2002 See abstract, Fig. 3	1-6
Y	US 6,507,009 B1(Hitachi, Ltd.) 14 Jan. 2003 See Fig. 5-7, Fig. 12-13	1-6
A	US 6,064,637 A(Industrial Technology Research Institute) 16 May. 2000 See abstract, Fig. 8a-8b	1
A	US 6,285,635 B1(Matsushia Electric Industrial Co., Ltd.) 4 Sep. 2001 See Fig. 1-2	1
A	US 5,914,925 A(Eastman Kodak Company) 22 Jun. 1999 See Fig. 4	1
A	US 6,292,453 B1(Sony Corp.) 18 Sep. 2001 See Fig. 4	1
A	US 6,424,606 B1(Creative Technology LTD) 23 Jul. 2002 See Fig. 3	1

Further documents are listed in the continuation of Box C.

See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
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- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- "&" document member of the same patent family

Date of the actual completion of the international search

10 MAY 2004 (10.05.2004)

Date of mailing of the international search report

11 MAY 2004 (11.05.2004)

Name and mailing address of the ISA/KR


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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2003/002169

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6,493,296 B1	10-12-2002	JP 2000-149298 A KR 2000-035361 A SG 89303 A1 TW 459222 B	30-05-2000 26-06-2000 18-06-2002 11-10-2001
US 6,507,009 B1	14-01-2003	JP 3463003 B2 JP 2000-082226 A JP 2003-151162 A JP 2003-178482 A US 6721242 B2	05-11-2003 21-03-2000 23-05-2003 27-06-2003 13-04-2004
US 6,064,637 A	16-05-2000	TW 382704 B	21-02-2000
US 6,285,635 B1	04-09-2001	JP 11-176073 A TW 388871 B US 6493304 B2 US 2002-080700 A1	02-07-1999 01-05-2000 10-12-2002 27-06-2002
US 5,914,925 A	22-06-1999	None	
US 6,292,453 B1	18-09-2001	CN 11229798 B CN 1197268 A JP 10-188301 A	01-10-2003 28-10-1998 21-07-1998
US 6,424,606 B1	23-07-2002	TW 540033 B	01-07-2003